34928
S/115/62/000/004/005/007
E194/E154

9.6000 (1089,1331)

AUTHOR: Kurtev, N.D.

TITLE: Errors of a logarithmic amplitude-time transducer in a device for measuring the logarithm of a ratio

PERIODICAL: Izmeritel'naya tekhnika, no.4, 1962, 33-36

TEXT: Devices to measure the logarithm of the ratio between two magnitudes using a logarithmic amplitude-time transducer are employed in colour pyrometers and other instruments. Analysis of the conversion process is required to increase the accuracy and speed of measurements and to simplify the equipment. The logarithmic amplitude-time transducer comprises a pulse generator which produces exponential pulses and an amplitude comparator, whose output consists of pulses of constant amplitude. The duration of these pulses is proportional to the logarithm of the amplitude height of the input signals. The accuracy of conversion is analysed and methods of reducing the error are considered. One method consists in constant displacement of the zero level of the impulses applied to the

Card 1/3

1.6 seconds with the second, though both these values are better than are obtained with the more usual instruments. The experiments demonstrated the possibility of constructing simplified high speed systems based on logarithmic amplitude-time transducers.

There are 3 figures and 4 tables.

Card 3/3

KURTEV, N.D., kand.tekhn.nauk

Interference rejection of logarithmic pulse systems with logarithmic amplitude-time converters. Trudy VZEI no.26:101-106 '64.

Signal-to-noise ratio in a pulse amplifier. Ibid.:107-112

(MIRA 18:6)

L 64473-65 EWT(1)/EWA(h)

ACCESSION NR: AR5006540 S/0274/64/000/012/A014/A014

621.391.82:621.375

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz'. Sv. t., Abs. 12A72

AUTHOR: Kurtev, N. D.

TITLE: Signal-to-noise ratio in a pulsed amplifier

CITED SOURCE: Tr. Vses. zaochn. energ. in-ta, vyp. 26, 1964, 107-112

TOPIC TAGS: pulsed amplifier, signal to noise ratio

TRANSLATION: A formula has been developed which ties the principal parameters of a pulsed amplifier with the signal-to-noise ratio (SNR) at its output, allowing for the frequency-dependent component of the energy spectrum of the input fluctuation process. The problem solution is applicable to radiation-measuring systems with a photoelectric-sensor input. It is assumed that the amplifier frequency characteristic lies in a low frequency band and is determined by the time constants of these three circuits: input (τ_1), equivalent integrating (τ_2), and differentiating circuit (τ_3) which are regarded as quardipoles connected in series. This formula is derived for SNR: $\frac{s}{n} = \frac{\varphi_1}{\sqrt{b}}$,

Card 1/2

L 64473-65

ACCESSION NR: AR5006540

(1)

where

$$\tau_1 = -\frac{1}{\gamma\frac{\gamma}{\gamma-1}}\sqrt{\frac{\gamma_0-1}{\alpha_2\frac{\gamma-1}{\gamma}\frac{a'}{b}}+\ln\gamma} \qquad \gamma=\frac{\tau_2}{\tau_1};\ \alpha_1=\frac{1}{\tau_2};$$

a', b are constants depending on the circuit parameters. SNR is the maximum for an optimum value γ dependent on τ_2. With τ_2 increasing, the maximum shifts toward the equality of the time constants and becomes higher and blunter. In the extreme case, the curve coincides with the very-low-frequency characteristic. The latter is independent of the absolute values of the time constants; it depends only on their ratio. The SNR value has been corroborated experimentally for $b/a' = 300$. Two illustrations. Bibliography: 7 titles.

SUB CODE: EC ENCL: 00

Card 2/2

3(8) SOV/9-59-2-14/16

AUTHOR: Kurtev, P.I. (Bulgaria)

TITLE: Physic[illegible] of Productive Carbonate Deposits of North-[illegible] (Fizicheskiye svoystva produktivn[illegible] karbonatnykh otlozheniy severo-vostochnoy Bolgarii)

PERIODICAL: Geologiya nefti i gaza, 1959, Nr 2, pp 64-66 (USSR)

ABSTRACT: Information is given on results of laboratory experiments investigating the interdependence of physical and collecting properties of cavernous fissured limestone and dolomites of the Valanginian stage, in North-East Bulgaria. The experiments were carried out in order to obtain precise data on the possibility to use electric methods in well exploration. Cylindrical and cubic specimens were subjected to tests and various parameters of characteristics for dolomites, limestone and dolomitized limestone were de[illegible]ined. It was stated that: oil saturation of intergranular pores in limestone and dolomitized limestone did not depend on porosity; oil saturation of dolomites increased with higher porosity; A tendency to direct dependence between porosity and penetration was observed in dolomites; it did not exist in dolomitized limestone. The dependence of relative electric re-

Card 1/2

Physical Properities of Productive Carbonate Deposits of North-East garia

...on porosity was similar in both materials and can be practically used. The relation between diffusion-adsorption ... and porosity has no practical importance. The effect ... caverns on the interrelation of electric resistance and porosity was investigated with the use of the Maxwell formula and a series of curves. The curves showed that electric resistance of cavernous rocks was higher than that of rocks with intergranular pores; the resistance increased with higher cavernosity and lower intergranular porosity. Relations of rock resistances in oil- and water-saturated conditions depended only on cavernosity. However, due to limited accuracy in determining this parameter, the possibility of cavernosity and oil content determination by electric methods only is considerably reduced.
There are 4 graphs and 8 references, 7 of which are Soviet and 1 English.

KURTEV, S.

"How we account for the working days"

Otchetnost I Kontrol V Selskoto Stopanstvo. Sofiia, Bulgaria. Vol. 3, no. 8, 1958

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclas

KURTEV, St.

Treatment of contractures and ankylosis of the lower extremity in osteoarticular tuberculosis. Ortop.travm. i protez. 20 no.3:67-68 Mr '59. (MIRA 12:6)

1. Iz bolgarskoy meditsinskoy brigady (glavnyy vrach - D. Marinov) v Koreyskoy Narodno-Demokraticheskoy Respublike i khirurgicheskogo otdeleniya (zav. - Chan Bo So) oblastnoy bol'nitsy g. Sinydzu.
(TUBERCULOSIS, OSTEOARTICULAR, compl.
contracture & ankylosis of leg, ther. (Rus))

Bulgaria/Military B-573

KURTEV, Stefan, Podpolkovnik, Med Ser; author of an article entitled "Intrajoint Application of Thrombocyte Preparations in the Presence of Hemarthrosis and Traumatic Hydrops." (Voenno Meditsinsko Delo, Sofia, Mar 61, pp 48-51)

24
(1)

KURTEV, T. I. Cand Geol-Min Sci -- (diss) "The physical properties of productive deposits in Northeastern Bulgaria and selection of the complex of geophysical methods for the exploration of bore cuts." Mos, 1957. 14 pp 20cm. (Min of Higher Education USSR. Mos Order of Labor Red Banner Petroleum Inst im I. M. Gubkin. Chair of Mine Geophysics), 120 copies

(KL,8-57, 108)

10

KURTEV, T.I.; NIKOLOVA, I.B.

- For the interpretation of the results of electrometric investigations
- in highly argillaceous sandstone pits. Godishnik fiz mat 57:135-140
'62/'63 [publ. '64].

KURTEV, T.I.

Accuracy and optimum conditions in the determination of electric conductivity of the stratal water after the method of spontaneous polarization. Godishnik fiz mat 55 no.2:37-49 '60/'61 [publ. '62].

L 33093-66 RO
ACC NR: AP6024607 SOURCE CODE: BU/0017/65/020/006/0005/0007

AUTHOR: Chak'rov, Kh. (Lt. colonel of the medical service); Kurtev, V. (Lt. colonel of the medical service) 29 B

ORG: none

TITLE: Raising to a higher level the military sanitary preparation in the Bulgarian People's Army

SOURCE: Voenno-meditsinsko delo, v. 20, no. 6, 1965, 5-7

TOPIC TAGS: sanitation, military medicine, CW agent

ABSTRACT: Organizational measures aimed at improvement of the medical and sanitary services are discussed. The necessity of being prepared to treat shock and conditions arising as a result of contamination of wounds with chemical warfare agents or of exposure of the whole organism to such agents is pointed out. [JPRS: 34,903]

SUB CODE: 06, 15 / SUBM DATE: none

Card 1/1 BK

0915 2241

BULGARIA

KURTEV, V., Lieutenant Colonel (Podpolkovnik), Medical Corps (Meditsinskata Sluzhba).

"Vasil D. MOLLOV, a Pioneer of Military Field Therapy in Bulgaria."

Sofia, Voenno Meditsinsko Delo, Vol 18, No 5, October 1963, pp 63-64.

Abstract: The subject of the article was born in 1875, studied medicine in various scientific centers in Europe, and participated in the Balkan wars of 1912-1913. He was particularly interested in yellow jaundice, of which many fighting soldiers were cured by him but which nevertheless resulted in a temporary loss of battle capacity.

References to four of the subject's publications, none of which is dated later than 1914.

1/1

- END -

2463
CSO: 2000-N

RUSEV, B., inzh.; KURTEV, V., inzh.

Combined leveling of triangulation and precise polygonometry by indirect and conditional methods. Godisznik Inzh stroit inst 14 no.1:229-238 '62. [publ.'63]

S/035/62/000/006/061/064
A001/A101

AUTHOR: Kurtev, Veliko

TITLE: Graphical adjustment of a combined intersection

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 6, 1962, 35, abstract 6G218 ("Godishnik Inzh-stroit. in-t. Fak. stroit., arkhitekt. i khidrotekhn", 1961, v. 13, no. 1, 13 - 16, Bulgarian; German summary)

TEXT: The author considers a method of constructing the error figure and subsequent calculation of coordinates of the point being determined according to Gel'mert (no source is indicated). Actually, the adjustment method is a graphical-analytical one. Let the sides of the figure of errors (in the case considered by the author - a triangle) be b_i, distances of the point being sought for to these sides be d_i, lengths of directions - s_i. Then the position of the point is determined from the conditional extremum:

$$\frac{1}{s_1^2} d_1^2 + \frac{1}{s_2^2} d_2^2 + \frac{1}{s_3^2} d_3^2 = \min,$$

Card 1/2

S/035/62/000/006/061/064
A001/A101

Graphical adjustment of a combined intersection and simultaneously $b_1d_1 + b_2d_2 + b_3d_3 = 2F$ (double area of the figure).

O. Sheynin

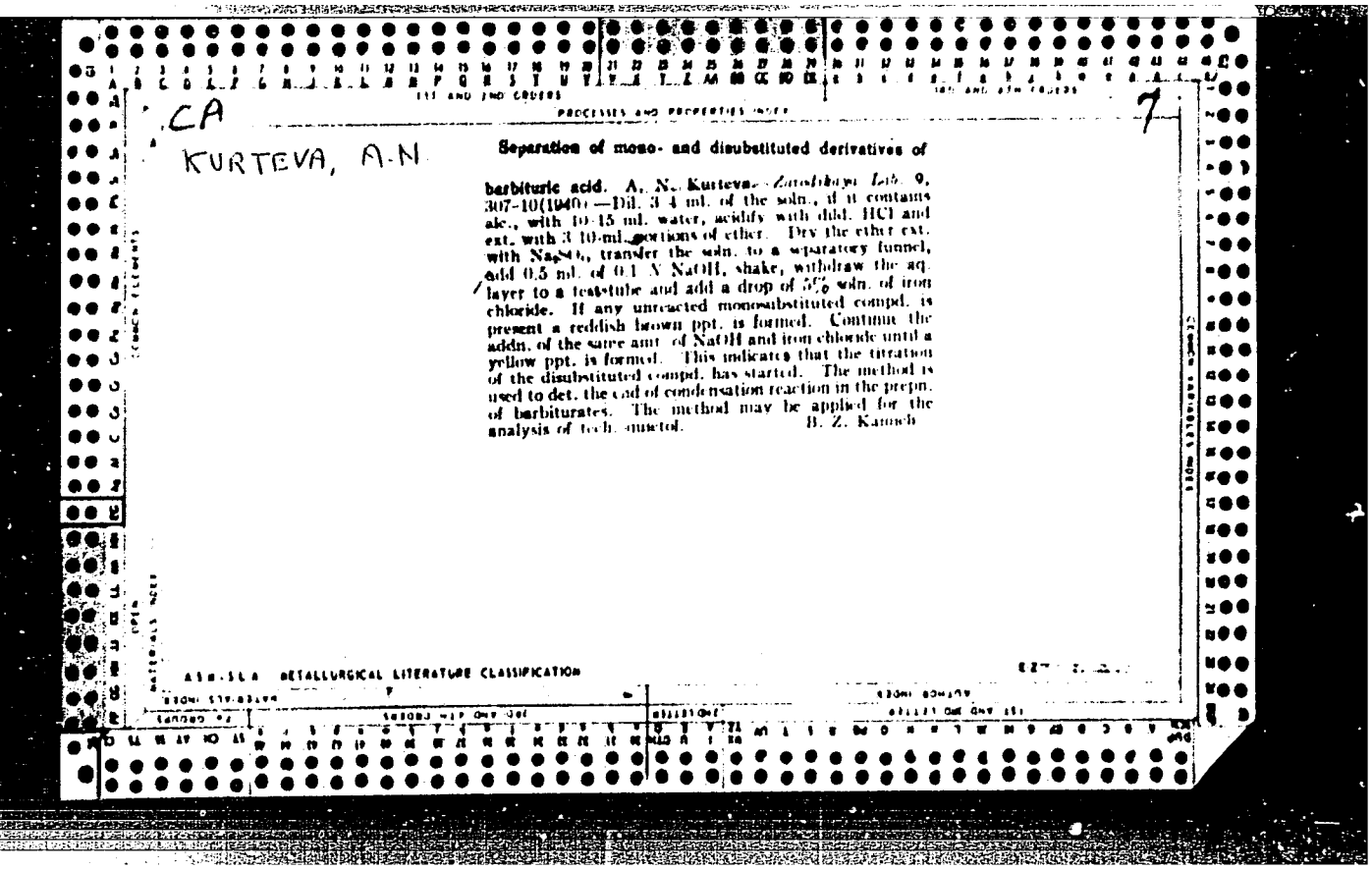
[Abstracter's note: Complete translation]

Card 2/2

SEREBRYAKOVA, L.V.; KURTEVA, A.K.

Fungous diseases of children and their treatment. Vest.derm. i ven. 31 no.2:48 Mr-Ap '57. (MIRA 12:12)

1. Iz Omskogo mikologicheskogo statsionara.
(DERMATOMYCOSIS) (CHILDREN--DISEASES)



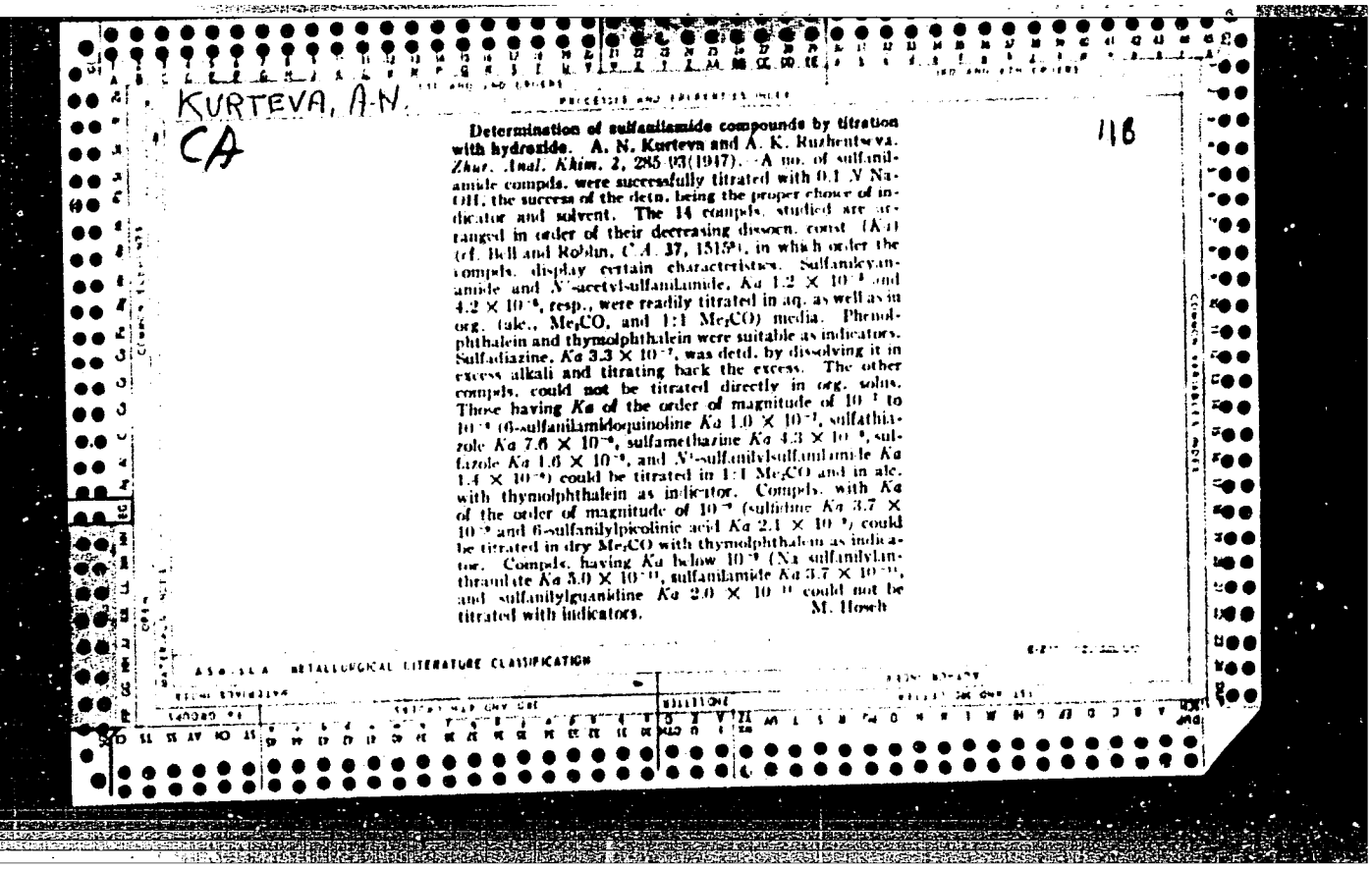
CA

KURTEVA, A.N.

7

Separation of mono- and disubstituted derivatives of barbituric acid. A. N. Kurteva. *Zavodskaya Lab.* 9, 307-10(1940).—Dil. 3-4 ml. of the soln., if it contains alc., with 10-15 ml. water, acidify with dild. HCl and ext. with 3 10-ml. portions of ether. Dry the ether ext. with Na_2SO_4, transfer the soln. to a separatory funnel, add 0.5 ml. of 0.1 *N* NaOH, shake, withdraw the aq. layer to a test-tube and add a drop of 5% soln. of iron chloride. If any unreacted monosubstituted compd. is present a reddish brown ppt. is formed. Continue the addn. of the same amt. of NaOH and iron chloride until a yellow ppt. is formed. This indicates that the titration of the disubstituted compd. has started. The method is used to det. the end of condensation reaction in the prepn. of barbiturates. The method may be applied for the analysis of tech. material. B. Z. Kanoch

A 54-51 A METALLURGICAL LITERATURE CLASSIFICATION



KURTEVA, A.N.

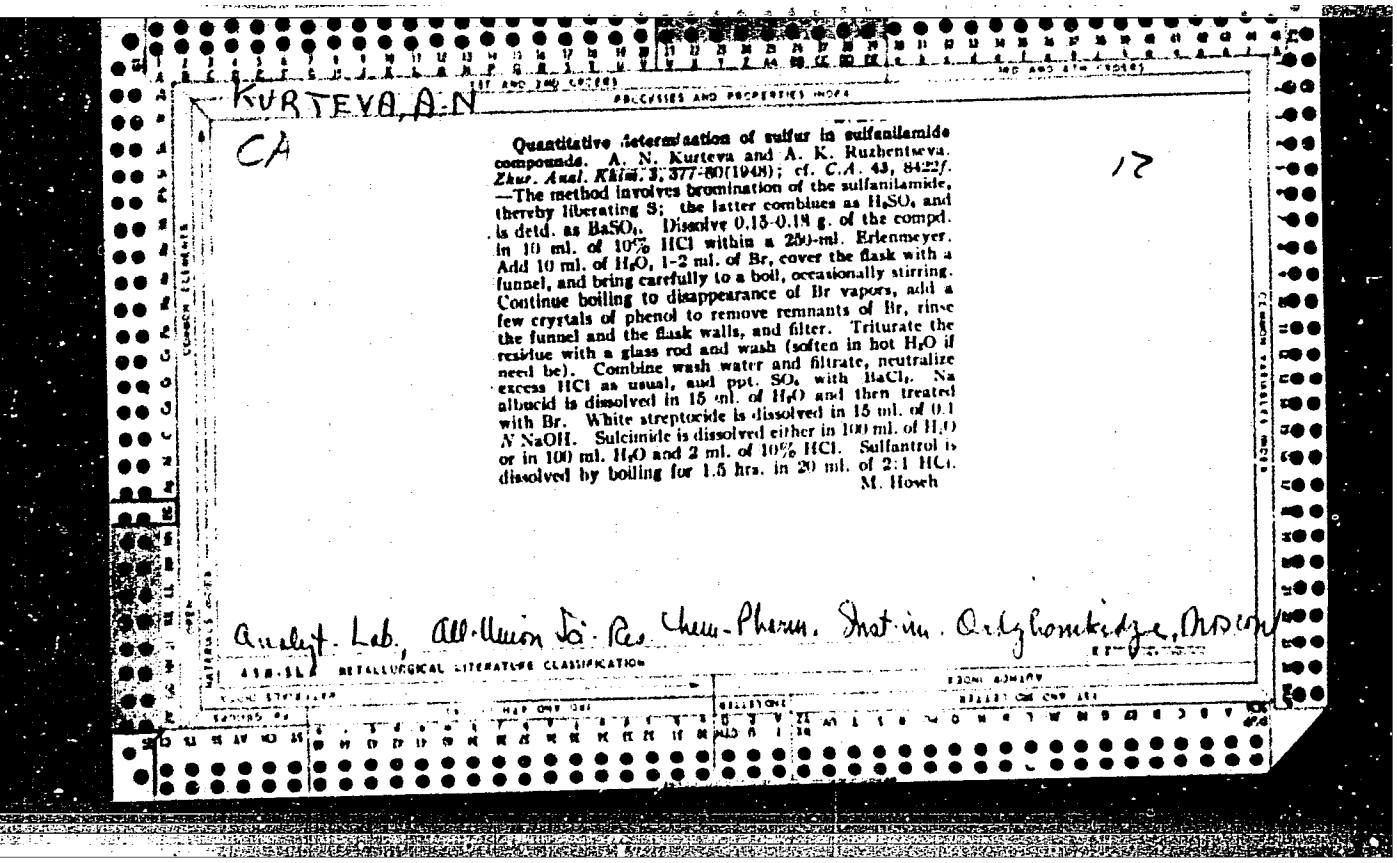
CA

116

Determination of sulfanilamide compounds by titration with hydroxide. A. N. Kurteva and A. K. Ruzhentseva. *Zhur. Anal. Khim.* 2, 285-93(1947).—A no. of sulfanilamide compds. were successfully titrated with 0.1 *N* NaOH, the success of the detn. being the proper choice of indicator and solvent. The 14 compds. studied are arranged in order of their decreasing dissocn. const. (*Ka*) (cf. Bell and Roblin, *C.A.* 37, 1515⁹), in which order the compds. display certain characteristics. Sulfanilcyanamide and *N*¹-acetyl-sulfanilamide, *Ka* 1.2×10^{-4} and 4.2×10^{-6}, resp., were readily titrated in aq. as well as in org. (ale., Me_2CO, and 1:1 Me_2CO) media. Phenolphthalein and thymolphthalein were suitable as indicators. Sulfadiazine, *Ka* 3.3×10^{-7}, was detd. by dissolving it in excess alkali and titrating back the excess. The other compds. could not be titrated directly in org. solns. Those having *Ka* of the order of magnitude of 10^{-7} to 10^{-8} (6-sulfanilamidoquinoline *Ka* 1.0×10^{-7}, sulfathiazole *Ka* 7.6×10^{-8}, sulfamethazine *Ka* 4.3×10^{-8}, sulfazole *Ka* 1.6×10^{-8}, and *N*¹-sulfanilylsulfanilamide *Ka* 1.4×10^{-8}) could be titrated in 1:1 Me_2CO and in ale. with thymolphthalein as indicator. Compds. with *Ka* of the order of magnitude of 10^{-9} (sulfidine *Ka* 3.7×10^{-9} and 6-sulfanilylpicolinic acid *Ka* 2.1×10^{-9}) could be titrated in dry Me_2CO with thymolphthalein as indicator. Compds. having *Ka* below 10^{-9} (*N*¹ sulfanilylanthranilate *Ka* 3.0×10^{-11}, sulfanilamide *Ka* 3.7×10^{-11}, and sulfanilylguanidine *Ka* 2.0×10^{-11} could not be titrated with indicators.

M. Hosch

A S & I A METALLURGICAL LITERATURE CLASSIFICATION



KURTEVA, A.N

CA

12

Quantitative determination of sulfur in sulfanilamide compounds. A. N. Kurteva and A. K. Ruzhentseva. *Zhur. Anal. Khim.* 3, 377-80(1948); cf. *C.A.* 43, 8422f. —The method involves bromination of the sulfanilamide, thereby liberating S; the latter combines as H_2SO_4 and is detd. as $BaSO_4$. Dissolve 0.15-0.18 g. of the compd. in 10 ml. of 10% HCl within a 250-ml. Erlenmeyer. Add 10 ml. of H_2O, 1-2 ml. of Br, cover the flask with a funnel, and bring carefully to a boil, occasionally stirring. Continue boiling to disappearance of Br vapors, add a few crystals of phenol to remove remnants of Br, rinse the funnel and the flask walls, and filter. Triturate the residue with a glass rod and wash (soften in hot H_2O if need be). Combine wash water and filtrate, neutralize excess HCl as usual, and ppt. SO_4 with $BaCl_2$. Na albucid is dissolved in 15 ml. of H_2O and then treated with Br. White streptocide is dissolved in 15 ml. of 0.1 *N* NaOH. Sulcimide is dissolved either in 100 ml. of H_2O or in 100 ml. H_2O and 2 ml. of 10% HCl. Sulfantrol is dissolved by boiling for 1.5 hrs. in 20 ml. of 2:1 HCl.
M. Howeh

Analyt. Lab., All-Union Sci. Res. Chem.-Pharm. Inst. im. Ordzhonikidze, Moscow

KURTEVA, O.I.; BRUTSKUS, Ye.B.

Solubility of calcium sulfate in a mixture of acids $H_3PO_4 + H_2SO_4$ and $H_3PO_4 + H_2SiF_6$. Zhur.prikl.khim. 34 no.8:1714-1722 Ag '61. (MIRA 14:8)

(Calcium sulfate)
(Solubility)

KOLEV, N.; KURTEVA, R.

Radial chromatography of sulfuric dyes. Khim i industriia 34 no.3:89-91 '62.

DIANKOVA, N.; KURTEVA, R.; POPOVA, N.

Reactive dyes. Khim i industriia 34 no. 1: 25-29 '64.

KOLEV, N.; KURTEVA, R.; DIANKOVA, M.

A method for the granulation of organic pigments. Godishnik Inst khim prom 2:83-89 '63.

POPOVA, Nadezhda, inzh.; DIANKOVA, Neda, inzh.; [illegible], Raisa, inzh.

New achievements in the field of dyeing textiles from 14 no. 1; 33-38 '65.

1. NIIKhIP, Sofia.

KURTEYEV, V. (g.kirov)

Portable bullet trap. Voen. znan. 31 [i.e.32] no.5 f18 My '56.
(MLRA 9:9)

1.Obshchestvennyy instruktor strelkovo-sportivnogo kluba Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu.
(Rifle ranges)

USSR/Engineering Oct 1947
Blasting
Mines and Mining

PA 26T14

"Introduction of Blasting at the Tyrny-Auz Quarry," V. V. Kurteyev, E. K. Il'nitskiy, Mining Engrs, 2 pp

"Gornyy Zhurnal" No 10

This quarry is located some 2,965 - 3,010 meters above sea level, and works the upper layers of a shear block. The quarry used to be worked by the step method, every step or stage being 3 meters in height. This method had several defects, the greatest of which was the necessity of using excess

IC 26T14

USSR/Engineering (Contd) Oct 1947

manpower. Even this new method has defects, however the chief one being that it results in creating rock pieces of large dimension.

26T14

IC

KURTEYEV, V. V.

KURTEYEV, V. V.

PA 15/49T102

USSR/Mines
Mining Methods
Mining Equipment

Sep 48

"Main Ore Chute of the Tyrny-Auz Mine," V. V. Kurteyev, Mining Engr, 1½ pp

"Gor Zhur" No 9

Describes shafts for transporting ore in Tyrny-Auz mine. Four sketches.

[redacted]

15/49T102

KURTGEL'DYYEV, K., assistent

Morphology of the arteries of the forearm. Zdrav. Turk. 3 no.6: 25-27 N-D '59. (MIRA 13:5)

1. Iz kafedry normal'noy anatomii (zav. - prof. S.S. Danilov) Turkmenskogo gosudarstvennogo meditsinskogo instituta im. I.V. Stalina.

(ARTERIES)

KURTGEL'DYYEV, K., assistent

Morphology of the artery of the forearm. Zdrav. Turk. 4 no. 2:21-22 Mr-Ap '60. (MIRA 13:10)

1. Iz kafedry normal'noy anatomii (zav. - prof. S.S. Danilov) Turkmenskogo gosudarstvennogo meditsinskogo instituta im. I.V.Stalina.

(ULNAR ARTERY)

KURTGEL'DYYEV, K., assistent

Correlative relationships between tha arteries and the skeleton of the forearm in fetuses and children during the first months of life. Zdrav. Turk. 5 no.5:19-20 S-O '61. (MIRA 14:12)

1. Iz kafedry normal'noy anatomii (zav. prof. S.S.Danilov) Turkmenskogo gosudarstvennogo meditsinskogo instituta imeni I.V.Stalina.
(ARM--BLOOD VESSELS) (FETUS)
(INFANTS (NEW-BORN))

KURTGEL'DYYEV, K.

New improved lines of cotton obtained by crossing forms with different types of branching. Izv. AN Turk. SSR. Ser. biol. nauk no.3:35-37 '63. (MIRA 17:1)

1. Turkmenskiy nauchno-issledovatel'skiy institut zemledeliya.

KURTH, Rudolf

Pulsing gas balls: answer to a [illegible]. Acta astronam 12 no.4: 261-266 '62.

KELEMEN, L., prof.; CSOGOR, I., dr.; SREMPEL, Marta, dr.; KURTHY, Eva

Contribution to the study of capillary permeability in epidemic hepatitis. Med. intern. (Bucur) 17 no.6:683-686 Je'65.

1. Lucrare efectuata in Clinica de boli infecticase, Institutul medico-farmaceutic, Tirgu Mures (director: prof. L. Kelemen).

KURTHI, L. 1948

(Oti Kozponti Korhazanak, II.Szamu Belo Ztalyarol.)

"Unusual Complication in theThiouracil Treatment of Grave's Disease."

Orvosok Lapja, Budapest, 1948, 2/31(988-989)
Abst: Exc. Med. III, Vol. III, No. 5, p. 178

KURTHY, LASZLO

FISCHER, Antal.; KURTHY, Laszlo.; ROHNY, Belane.

Examination of various esterases in hepatitis. Magy. belorv. arch. 10 no.1:24-29 Feb '57.

1. A budapesti Orvostudomanyi Egyetem III. sz. Belklinikajanak (igazgato: Gomori Pal dr. egyetemi tanar) es a budapesti Kozegeszsegugyi es Jarvanyugyi Allomas (igazgato: Kapos Vilmos dr) Hepatitit Korhazi Osztalyanak (foorvos: Kurthy Laszlo dr.) Kozlemenye.

(ESTERASES, in blood
in hepatitis (Hun))
(HEPATITIS, blood in
esterase activity (Hun))

SIMON, Miklos, Dr.; KURTHY, Laszlo, Dr.; ELODI, Pal a biologiai tudomanyok kandidatusa dr., SOOS, Sandor, Dr.; HORVATH, Bertalan, Dr.

Diagnostic significance of serum aldolase in liver diseases. Orv. hetil. 99 no.35:1201-1207 31 Aug 58.

1. A Magyar Nephadsereg Egeszsegugyi Szolgalatanak, a Budapesti Kozegeszsegugyi-Jarvanyugyi Allomas (igazgato: Kapos Vilmos dr.) Hepatitis Korhazanak (foorvos: Kurthy Laszlo dr.) es a MTA Biokemiai Intezetenek (Igazgato: Szorenyi Imre dr. akademikus) kozlemenye.

(DESMOLASES, in blood
zymohexase in liver dis., diag. significance (Hun))
(LIVER DISEASES, blood in
zymohexase, diag. significance (Hun))

KURTHY, Laszlo, dr.; SIMON, Miklos,dr.; SOOS, Sandor, dr.

Relation of serum aldolase activity to histological changes in the liver in acute hepatitis and other liver disorders. Orv.hetil. 101 no.31:1098-1102 31 Jl '60.

1. Fovarosi Pesthidegkuti Korhaz, II. sz. hepatitis osztaly, Magyar Nephadsereg Egeszsegugyi Szolgalata es X. Kobanyai-uti Szakrendelointezet
(ALDOLASE blood)
(LIVER DISEASES pathol)

KURTHY, L.

On the significance of stomach biopsy. Acta med. Hung. 18 no.3: 349-356 '62.

1. I. Hepatatis-Abteilung (Chefarzt: Dr. L. Kurthy) Des Bezirskkrankenhauses Pesthidegkut, Budapest.
(GASTRITIS) (BIOPSY)

KURTHY, P.

"The Uniform List of Products and Prices", I. 27, (TOBACCO SALES, Vol. 8, No. 8, July 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955, Uncl.

KURTYY, P.

"Calculation of Prime Cost", P. 31. (TOBBTERMELES, Vol. 8, No. 8, July 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955, Uncl.

RUMANIA/Pharmacology - Toxicology - Tranquilizers. V

Abs Jour : Ref Zhur Biol., No 4, 1959, 18553

Author : Mulfay, V., Kurthy, S., Nagy, O.
Inst : -
Title : The Treatment of Esophagal Spasms with Chlorpromazine

Orig Pub : Viata med., 1958, 5, No 7, 649-653

Abstract : No abstract.

Card 1/1

KURTI, Gyorgy

The Budapest exhibition of Polish scientific publications.
Magy tud 69 no.2:106-107 F '62.

1. Csoportvezeto, Akademiai Kiado, Budapest.

KURTI, Gusztav

Technologic questions relating to the manufacture and repair in the motor vehicle repair industry. Pt. 1. Gepyartastechn 1 no.7: 248-252 O '61.

1. Capital Electric Railways, Budapest.

KURTI, Gusztav

Technological problems in the manufacture and repair in the vehicle repair industry. Pt.2. Gepgyartastechn 2 no.1: 13-18 Ja '62.

1. Fovarosi Villamosvasut.

KURTI, Gusztav

Technical development, small-scale mechanization in the vehicle repair industry. Gepgyartastechn 2 no.7:252-255 Jl '62.

1. Fovarosi Villamosvasut.

KURTI, Istvanne

"Educational psychology" by Tomas Pardel. Reviewed by Mrs. Istvan Kurti. Magy pszichol szemle 20 no.2:305-306 '63.

KURTI, Istvanne

Problems of educational psychology in Czechoslovakia. Magy pszichol szemle 20 no.4:590-596 '63.

KURTI, L.

"A new successful radio play," "The Kallai Kettos." p. 4.
"The periodical Unser Rundfunk, organ of the Radio Committee of the German Democratic Republic; a criticism." p. 6
"-senyi. Marginal notes on the radio listener." p. 8
"Peter Veres' Laci; an announcement of a radio play." p. 8
(Magyar Radio, Vol. 9, No. 42, October, 1953, Budapest)

SO: Monthly List of East European Accessions, Vol. 3, No. 3, Library of Congress, March 1954, Uncl.

POLAND/Atomic and Molecular Physics - Low Temperature Physics D-5

Abs Jour : Ref Zhur - Fizika, No 12, 1958, No 27312

Author : Kurti N., Robinson F.N.H., Simon F., Spohr D.A.
Inst : Not Given
Title : Magnetic Method of Obtaining Lowest Temperatures.

Orig Pub : Nukleonika, 1957, 2, No 1, 147-155

Abstract : Translation of an article, containing a description of an experiment on nuclear adiabatic demagnetization (Referat Zhur Fizika, 1957, No 3, 6365).

Card : 1/1

AUTHOR: KURTI,N., ROBINSON,F.N., SIMON,F., SPOR,D.A. PA - 2171
TITLE: Nuclear Cooling (Yadernoye okhlazhdeniye, Russian)
PERIODICAL: Uspekhi Fiz.Nauk, 1957, Vol 61, Nr 1, pp 45-51 (U.S.S.R.)
Received: 3 / 1957 Reviewed: 4 / 1957

ABSTRACT: This paper was published in the original in Nature, 178,450 (1956) and was translated by P.A.CHENCOV into Russian. Shortly after the first successful experiments concerning magnetic cooling it was suggested that a system of deeper temperatures be attained by the demagnetization of a system of nuclear spins, i.e. systems in which nuclear spins settle. The problem of realizability was investigated rather accurately by F.E.SIMON, Le Magnetism, 3, 1, Strasbourg, 1940. In accordance, magnetic field strengths of the order of 50.000 Ørsted and temperatures of the order 0,01° K are necessary for a perceptible reduction of the entropy of the nuclear system. The first part of all experiments concerning nuclear cooling has to consist of a magnetization, i.e. of the polarization of nuclear spin. For the orientation of nuclei atomic and molecular fields can be used, for which quite a series of methods was suggested. J. HATTON and B.V.ROLLIN, Proc.Roy.Soc.A 199, 222 (1949) began with the second stage of these experiments; they demagnetized a calcium fluoride crystal with an initial field strength (at 1,2° K) of up to 500 Ørsted. In this way they obtained 0,17° K.
The authors of this paper believe to have approached more closely to their final aim. This aim consists in a perceptible reduction

Card 1/2

PA - 2171

Nuclear Cooling.

of the entropy of the system of nuclear spins under the action of an exterior magnetic field. By measuring the temperature obtained on the occasion of demagnetization, data concerning the nuclear interactions in solids could be obtained. Nuclear cooling occurs as follows: A substance with nuclear paramagnetism is magnetized in a strong magnetic field, on which occasion the liberated magnetization heat is absorbed by a "heat absorber". Magnetic field-strength is then reduced to zero, and if this process develops adiabatically, the system of nuclear spins cools down to a temperature which depends on the initial temperature, the strength of the applies magnetic field, and on nuclear interactions. The conditions for the utility of heat absorbers are discussed. The construction of the device is discussed and an illustration of the sample and the holder is attached. The carrying out of nuclear cooling is described. According to the results (demonstrated in a diagram) obtained, temperature differences of about 20.10^{-6} o K can be obtained. (2 illustrations).

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress
Card 2/2

KURTI, N.

Cooling by adiabatic demagnetization of nuclear spins. Usp. fiz. nauk 75 no.1:151-168 S '61. (MIRA 14:9)
(Low temperature research)

KURTI, Oskar, Ing.

Granulite. Constr Bau 16 no.766:2 12 September 1964.

KURTI, Oscar, ing., corespondent

The main objective of socialist competition, the quality of products. Constr Buc 17 no.783:2 9 Ja '65.

KURTI, S.

DAVID, TIVADAR, MEGS, J.; MAJOR, S.; KURTI, S.

The significance of segmental resection of the lungs. Magy. sebeszet 6 no.3:173-180 Aug 1953. (CIML 25:5)

1. Doctors. 2. Surgical Department of Szolnoki County Institute of Pulmonary Diseases (Head Physician -- Dr. Tivadar David).

PERENYI, Gyorgy, dr.; KURTI, Sandor, dr.

Monaldi8s drainage in the treatment of pulmonary abscesses.
Tuberkulozis 13 no.8:243-244 Ag '60.

1. A szolnoki megyei Tudobeteggyogyintezet (igazgato-foorvos: Perenyi Gyorgy dr.) kozlemenye.
(LONG ABSCESS ther.)
(DRAINAGE)

KURTI V. Prispevek k otazce oleolysy mycobacteria tuberkulosy, Oleolysis of Mycob acterium tuberculosis, Rozhledy v Tuberkulose, Prague 1949, 9/2-3 (144-146)

The oleolytic influence of certain oils on cultures of M. tuberculosis was tested. The cultures were grown on potato-glycerine medium. Of the oils having a bactericidal action on the tubercle bacillus, eugenol, quayacol and anethol were tested. The first two did not cause oleolysis, most likely because of the concurrent denaturation of albumens. Anethol, which does not contain free phenolic hydroxyl groups, and does not cause denaturation, caused rapid and extensive oleolysis. Further tests with anethol derivatives are in progress.

Kvacek - Prague

So: Medical Microbiology and Hygiene, Section IV, Vol 3, No 1-6

KURTI, V.

Metabolism of typtophan and indole in pulmonary tuberculosis. Biol. listy 31 no.1:21-23 27 May 50. (CLML 19:4)

1. Of the Lung Department of the State District Hospital in Prague VIII, Bulovka, and of the Institute of Clinical Physiology (Head—Prof. Josef Skladal, M.D.)

The relation of ascorbic acid to p-aminosalicylic acid (PAS). V. Kárl and J. Hejaf. *Časopis Lékařů Českých* 91, 251-[illegible] Vitamin C does not interfere with the action of PAS even if given in large doses. Bacteriostatic expts. with PAS in combination with vitamin C did not show a decrease of the bacteriostatic action of PAS. The addn. of vitamin C seems to stabilize PAS. Otto R. Lehsteia

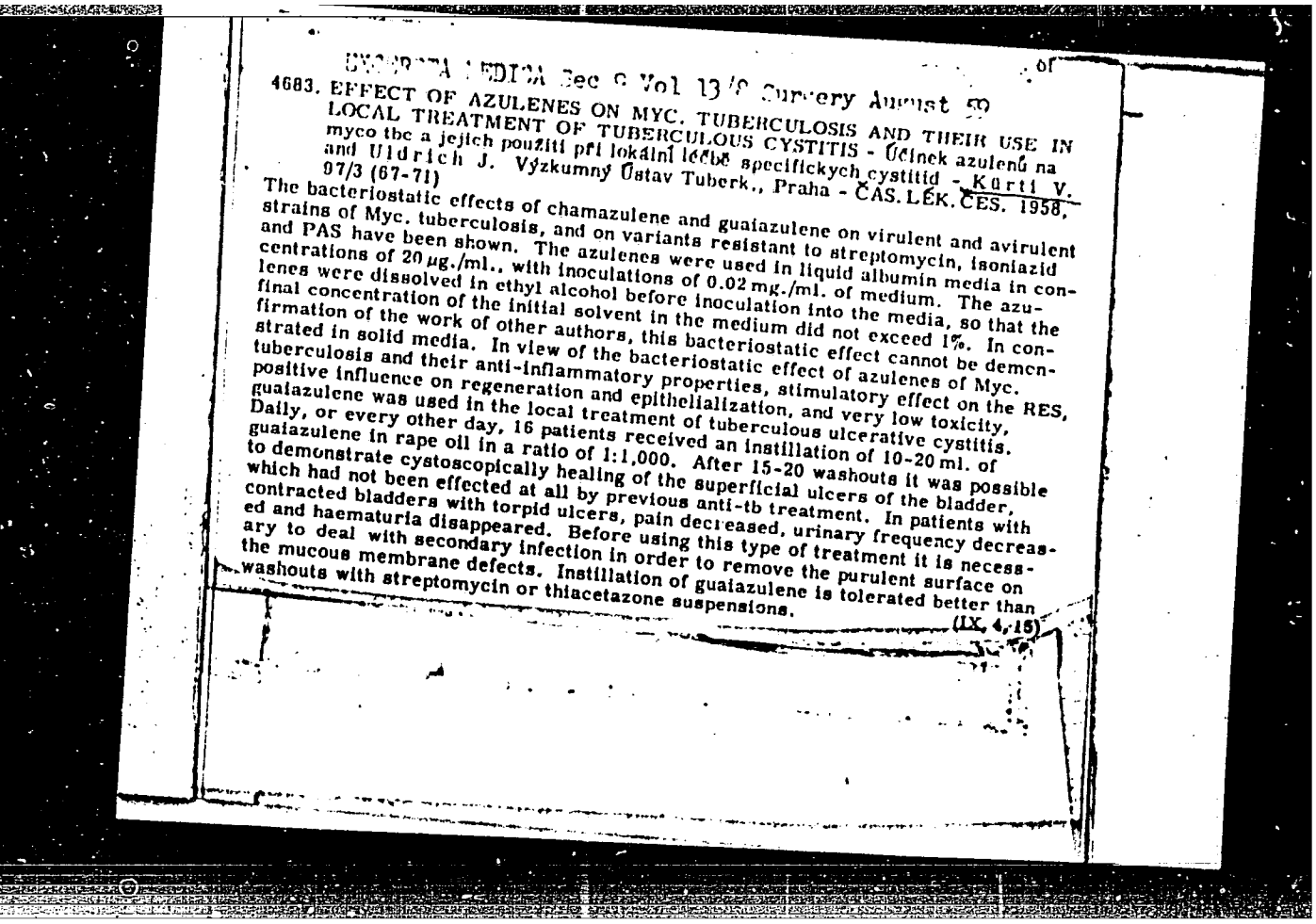
3

(1)

1403. KÚRTI V. and HEJNÝ J. *K problematike nezнášanlivosti-p-aminosalicylovej kyseliny pri liečbe tbc. The problem of PAS intolerance during tb therapy ROZHL. TUBERK. 1956, 16/7 (361-364) Illus. 2

The addition of L-ascorbic acid and at times glucose to the infusion is recommended to eliminate side-effects. Intolerance to oral treatment was mitigated by individual substitutional therapy with digestive enzymes, vitamin C and glucose; the latter is recommended on clinical and laboratory evidence.

Blumberg - Jevičko

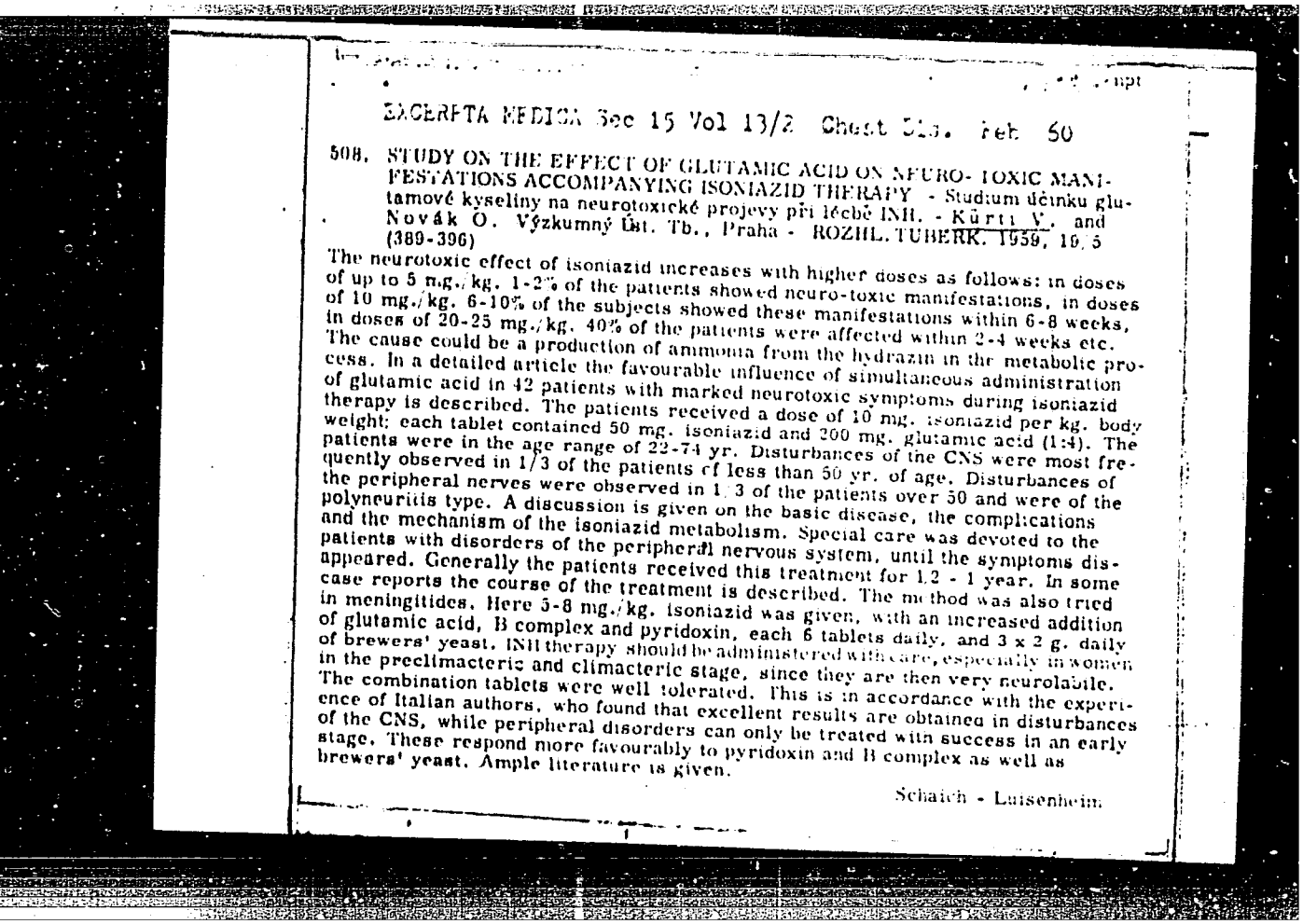


EXCERPTA MEDICA Sec 9 Vol 13/9 Surgery August 59

4683. EFFECT OF AZULENES ON MYC. TUBERCULOSIS AND THEIR USE IN LOCAL TREATMENT OF TUBERCULOUS CYSTITIS - Účinek azulenů na myco tbc a jejich použití při lokální léčbě specifických cystitid - Kürti V. and Ulrich J. Výzkumný Ústav Tuberk., Praha - ČAS. LÉK. ČES. 1958, 97/3 (67-71)

The bacteriostatic effects of chamazulene and guaiazulene on virulent and avirulent strains of Myc. tuberculosis, and on variants resistant to streptomycin, isoniazid and PAS have been shown. The azulenes were used in liquid albumin media in concentrations of 20 µg./ml., with inoculations of 0.02 mg./ml. of medium. The azulenes were dissolved in ethyl alcohol before inoculation into the media, so that the final concentration of the initial solvent in the medium did not exceed 1%. In confirmation of the work of other authors, this bacteriostatic effect cannot be demonstrated in solid media. In view of the bacteriostatic effect of azulenes of Myc. tuberculosis and their anti-inflammatory properties, stimulatory effect on the RES, positive influence on regeneration and epithelialization, and very low toxicity, guaiazulene was used in the local treatment of tuberculous ulcerative cystitis. Daily, or every other day, 16 patients received an instillation of 10-20 ml. of guaiazulene in rape oil in a ratio of 1:1,000. After 15-20 washouts it was possible to demonstrate cystoscopically healing of the superficial ulcers of the bladder, which had not been effected at all by previous anti-tb treatment. In patients with contracted bladders with torpid ulcers, pain decreased, urinary frequency decreased and haematuria disappeared. Before using this type of treatment it is necessary to deal with secondary infection in order to remove the purulent surface on the mucous membrane defects. Instillation of guaiazulene is tolerated better than washouts with streptomycin or thiacetazone suspensions.

(IX, 4, 15)



EXCERPTA MEDICA Sec 15 Vol 13/2 Chest Dis. Feb 60

508. STUDY ON THE EFFECT OF GLUTAMIC ACID ON NEURO- TOXIC MANIFESTATIONS ACCOMPANYING ISONIAZID THERAPY - Studium účinku glutamové kyseliny na neurotoxické projevy při léčbě INH. - Kürti V. and Novák O. Výzkumný Ust. Tb., Praha - ROZHL. TUBERK. 1959, 19, 5 (389-396)

The neurotoxic effect of isoniazid increases with higher doses as follows: in doses of up to 5 mg./kg. 1-2% of the patients showed neuro-toxic manifestations, in doses of 10 mg./kg. 6-10% of the subjects showed these manifestations within 6-8 weeks, in doses of 20-25 mg./kg. 40% of the patients were affected within 2-4 weeks etc. The cause could be a production of ammonia from the hydrazin in the metabolic process. In a detailed article the favourable influence of simultaneous administration of glutamic acid in 42 patients with marked neurotoxic symptoms during isoniazid therapy is described. The patients received a dose of 10 mg. isoniazid per kg. body weight; each tablet contained 50 mg. isoniazid and 200 mg. glutamic acid (1:4). The patients were in the age range of 22-74 yr. Disturbances of the CNS were most frequently observed in 1/3 of the patients of less than 50 yr. of age. Disturbances of the peripheral nerves were observed in 1/3 of the patients over 50 and were of the polyneuritis type. A discussion is given on the basic disease, the complications and the mechanism of the isoniazid metabolism. Special care was devoted to the patients with disorders of the peripheral nervous system, until the symptoms disappeared. Generally the patients received this treatment for 1/2 - 1 year. In some case reports the course of the treatment is described. The method was also tried in meningitides. Here 5-8 mg./kg. isoniazid was given, with an increased addition of glutamic acid, B complex and pyridoxin, each 6 tablets daily, and 3 x 2 g. daily of brewers' yeast. INH therapy should be administered with care, especially in women in the preclimacteric and climacteric stage, since they are then very neurolabile. The combination tablets were well tolerated. This is in accordance with the experience of Italian authors, who found that excellent results are obtained in disturbances of the CNS, while peripheral disorders can only be treated with success in an early stage. These respond more favourably to pyridoxin and B complex as well as brewers' yeast. Ample literature is given.

Schaich - Luisenheim

KURTI, V.

Life and activities of academician Nikolai Fedorovich GAMALEIA. 100th anniversary of his birth and loth anniversary of his death, 2/5/1859 -- 3/29/1949. Cas.lek.cesk 99 no.29:1082-1085 19 Ag'60.

(BIOGRAPHIES)

KRIVENEL, Rudolf Karel

5

Country: Czechoslovakia

Academic Degrees:

Affiliation: Tuberculosis Research Institute (Výzkumný ústav tuberkulozy), Prague. Director: Docent Dr R. [Rudolf] KRIVENEL.

Source: Prague, Acta Medicae et Tuberculosis et Morborum Pulmonalium, No 4, Apr 61, pp 276-280

Data: "Serum Levels of Hyaluronic Acid in Tuberculous Patients"

Co-authors:

DRUZHKOVA, V. Tuberculosis Research Institute, Prague

NOVAK, O. " " " "

KURTI V.

KYURTZ, V. [redacted] ULDRIKH, I. [Uldrich, I.]

Local treatment of specific ulcerous systitis with guaiazulene. Urologiia 28 no.2:51-52 Mr-Ap'63. (MIRA 16:6)

1. Iz Nauchno-issledovatel'skogo instituta tuberkuleza v Prage (dir. - dotsent R.Krzhivinka).
(BLADDER—ULCERS) (GUAIAZULENE)

KURTI, V.

Lysozyme and its therapeutic use in pediatrics. Ceak. pediat. 20 no.7:640-643 Jl '65.

CZECHOSLOVAKIA

UDC 612.015.3(577.153.9).014.469

KURTI, V.; NOVAK, O.; STUTLIKOVA, V.; Research Institute of Tuberculosis (Vyzkumny Ustav Tuberkulozy), Prague, Director (Reditel) Docent Dr R. KRIVINKA.

"Effect of Ethionamide on the Activity of Cholinesterase and of Acetylcholinesterase."

Prague, Casopis Lekaru Ceskych, Vol 105, No 52, 23 Dec 66, pp 1409 - 1411

Abstract [Authors' English summary modified]: Ethionamide and preparation 1321Th have a constant and significant inhibitory effect on cholinesterase and acetylcholinesterase serum activity of human red cells in vitro in concentrations of 5.10^{-3} M. At lower concentrations only some effect was noticed. Other antituberculosis drugs do not show a similar effect. Some side-effects caused by ethionamide are explained by the cholinesterase activity inhibition. 1 Table, 6 Western, 2 Russian references. (Manuscript received May 66).

1/1

KURTIKOVA, V. M., BELYALOV, I. G. and SIROTKINA, L. P.

*The use of blood substitutes (Russian text) KLIN. MED. (Mosk.) 1952, 30 (78-81)Tables 2
Numerous cases are reported and it is concluded that intravenous injections of solutions containing glutamic acid, ethyl alcohol and monosaccharide, besides improving the general condition of the patient, also increase the haemoglobin level and the erythrocyte count and normalize the production of leucocytes and leucocyte count. A restoration of function was also observed with regard to the bone marrow, with the appearance of immature erythrocytes in the blood. In view of these favorable results a more widespread use of this substitute, which was found to be highly effective not only in haemorrhagic conditions, but also in cases of severe toxaemia, is regarded as advisable.

Parenti - Ferrara (IX,4,6)

SO: EXCERPTA MEDICA, Sec. IV, Vol. 7 No. 10

KURTIN, V.Ya.

Production and distribution of individual loaves of bread in Moscow. Khleb. i kond. prom. 1 no.1:37-39 '57. (MLRA 10:4)

1. Moskovskiy gorodskoy trest Rosglavkhleba.
(Moscow--Bread)

GINZBURG, Arkadiy Grigor'yevich, dotsent; ZAGLODINA, F.I., spetsred.; KURTINA, L.P., vedushchiy red.

[Controlling alcohol fermentation in the baking industry by means of the AG-1 apparatus] Konrol' spirtovogo brozheniia priborom AG-1 v khlebopekarnoi promyshlennosti. Moskva, Gos.nauchno-issl. in-t nauchn. i tekhn.informatsii, 1959. 30 p. (MIRA 13:5)
(Fermentation) (Bakers and bakeries)

KURTINOV, A.V., inzh.

Some remarks concerning Technical Specifications for Railroad Construction on Permafrost. Transp.stroi. 10 no.1:52-54 Ja '60. (MIRA 13:6)
(Railroad engineering) (Frozen ground)

KARMAZIN, V.I., doktor tekhn.nauk; KHRSONETS, L.N., inzh.; KUNTIY, V.V., inzh.; NIKOLAYENKO, V.P., inzh.

Industrial testing of drum separators using the overflow of classifiers. Gor.zhur. no.6:70-73 Je '60. (MIRA 14:2)

1. Mekhanobrchermet, Krivoy Rog.
(Separators)

KURTIYEVA, L.

Novaya Nematoda Iz Kishechinka Ptits Turkestanskoy SSR - Strongyloides Turkmenica Nov. Sp., "Works on Helminthology" on the 75th Birthday of K. I. Skryabin, Izdak, Akad. Nauk, SSSR, Moskva, 1953, p. 347
All-Union Inst. Helminthology im K. I. Skryabin and Zoologo-Zootechnical Institute, acad. Sci., Turkmen SSSR

Dissertation: "Development of the Peripheral End of the Sensitive Analyzer of a Horse." Cand Vet Sci, Ashkhabad Medical Inst imeni I. V. Stalin, 15 May 54.
Turkmenskaya Iskra, Ashkhabad, 5 May 54.

SO: [illegible] 24, 20 Nov 1954

BALCIKONYTE, S.; GLINSKIENE, V.; KRASAUSKAS, V.; KURTINYTE, G.; STUKONIS, M.

Experience with combined preventive examinations for the population. Sveik. apsaug. 8 no.5:38-43 '63.

1. Kupiskio rajono ligonine. Vyr. gyd. - G. Kurtinyte. LTSR Onkologijos m. t. institutas. Direktorius - med. m. kand. A. Telycenas.

(PREVENTIVE MEDICINE) (HEALTH SURVEYS)

SOV/120-58-6-19/32

AUTHORS: Brandt, A. A. and Kurtmulayev, R. Kh.

TITLE: A Study of Fast Ionisation Processes in the Gas Current behind a Shock Wave (Issledovaniye bystrykh ionizatsionnykh protsessov v gazovom potoke za udarnoy volnoy)

PERIODICAL: Pribory i tekhnika eksperimenta, 1958, Nr 6, pp 94-97 (USSR)

ABSTRACT: In studying the propagation of shock waves in gases, one often has to measure ionisation processes whose duration is of the order of 100 to 300 μs. In the usual methods (Ref.1) these processes are measured using probes. However, the use of probes involves serious difficulties. The method described in this paper involves measurements of the current of ionised gas, without upsetting the gasodynamic characteristics, by passing the gas along the axis of a cylindrical high frequency resonator. The resonator is illustrated in Fig.1. The method may be used to measure the coefficients of thermal ionisation of a gas in the current behind a shock wave propagated with a velocity of about 3 km/sec. The coefficient may be measured with an accuracy of about 10% at a number of points, uniformly distributed in space. The resonator vibrations of type E_{01c} are excited by a klystron generator. If the diameter of the resonator is greater than the diameter

Card 1/4

A Study of Fast Ionisation Processes in the Gas Current behind a Shock Wave

of the gas channel, then the electric field is approximately uniform within the limits of the gas channel. The motion of a charged particle of mass m and charge e which is under the action of the field E of the resonator is described by:

$$m\ddot{z} = eE + F \qquad (1)$$

where z is the distance along the axis of the resonator and F is the analogue of friction and is due to collisions between the charged particle and the gas molecules. If one assumes that the particle loses all its momentum on collision, we have:

$$F = - m\nu\dot{z} \quad , \qquad (2)$$

where ν is the frequency of the collisions. On solving Eq.(1) when E varies sinusoidally, we find that:

A Study of Fast Ionisation Processes in the Gas Current behind a Shock Wave

$$\left.\begin{aligned} \sigma_r &= \frac{ne^2}{m} \times \frac{\nu}{\omega^2 + \nu^2} \\ \sigma_i &= -\frac{ne^2}{m} \times \frac{\omega}{\omega^2 + \nu^2} \end{aligned}\right\} \qquad (3)$$

which give the values of the real and the imaginary parts of the complex conductivity due to the motion of the charged particles. The concentration of charged particles n is then given by:

$$n = -\frac{m\omega}{e^2}\left(\sigma_i + \frac{\sigma_r^2}{\sigma_i}\right) \qquad (4)$$

Since the mass of an ion is greater by three orders of magnitude than the mass of an electron, n may be looked upon as practically equal to the electron concentration. From the above equations it is clear that the ionisation of the gas leads to a change in the dielectric constant of the volume

A Study of Fast Ionisation Processes in the Gas Current behind a Shock Wave

of the resonator, which is filled with the gas and also to the appearance of additional losses. The dependence of the real and imaginary parts of the conductivity on the resonator parameters is given by Eqs. (6) and (5) and when these are substituted in Eq.(4) the electron concentration n may be found. There are 3 figures and 2 references, of which 1 is Soviet and 1 is English.

ASSOCIATION: Fizicheskiy fakul'tet MGU (Physics Department, Moscow State University)

SUBMITTED: June 3, 1957.

KURTMULLAYEV, R.Kh. (Novosibirsk); NESTERIKHIN, Yu.Ye (Novosibirsk); Ponomarenko, A.G. (Novosibirsk)

Raleigh - Taylor instability in a conical plasma accelerator. PMTF no. 6:144-146 N-D '63. (MIRA 17:7)

L 6525-65 EWT(1)/EWG(k)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EEC(b)-2/EWA(m)-2 Po-4/
Pa-6/Pab-24/Pi-4 IJP(c)/AFMDC/RAEM(c)/AEDC(a)/ASD(p)-3/BSD/AFETR/AFWL/SSD/ASD(a)-5/BEC
AEDC(b)/ESD(si)/ESD(t)/RAEM(t)
ACCESSION NR: AP4047369 S/0294/64/002/005/0661/0671

AUTHORS: Kurtmullayev, R. Kh; Nesterikhin, Yu. Ye.; Ponomarenko, A. G. 112 109

TITLE: Investigation of plasma jet structure created from a conical source

SOURCE: Teplofizika vysokikh temperatur, v. 2, no. 5, 1964, 661-671

TOPIC TAGS: magnetic field, plasma arc, plasma decay, electric conductivity, plasma jet, charged particle/ KGB condenser, IM 150/5 condenser, SVCh, sounding apparatus, SFR optical device, FEU optical device, monochromator, Langmuir probe, Rogovskiy loop

ABSTRACT: The structure of a plasma jet stream, generated from a conical source, was investigated in an attempt to determine the directed velocity, energy, and the mechanisms involved in the loss of charged particles. Two conical sources were used with 25° included angles, one with 5-cm and the other with 10-cm base diameters. KBG capacitors were used with 32 μf capacitance, 10-kv maximum discharge potential, and a discharge current of 3×10^5 amps. Two 2000-oersted Helmholtz coils were placed around the jet, which in turn was confined in a glass tube 2 m in length. The measuring apparatus consisted of optical instruments, electro-

Card 1/3

magnetic counters (connected to double Langmuir probes, magnetic probes and Rogovskiy loops) and an SVCh-sounding apparatus. Charged particle concentration distributions, the conductivity, and effective collision frequencies were measured by means of a velocity interferometer with 3×10^{-8} sec time resolution. In the absence of magnetic fields, measurement results indicate a sharp velocity gradient in the arc-jet which is divided into four regions: a sharp front layer followed by a dark region, a bright spiraling principal region and, finally, the tail end. Analysis shows more than 90% of the plasma to be in the principal region of the arc-jet. Density profiles taken across the plasmoid by means of an interferometer indicate a very inhomogeneous structure. Estimates of high-frequency conductivity and collision frequency yield the values: 6×10^7 to 4×10^8 CGSE and 7×10^9 to $3 \times 10^{10} sec^{-1}$ respectively. These results show that the jet is unstable, with large inherent loss mechanisms which decelerate the plasma and induce charge decay. This deceleration and decay are noticeably reduced in the presence of a strong external magnetic field. Oscillograph records show a sharp reduction in the longitudinal inhomogeneity observed between the tail and front layer of the jet in a 1000-oersted field. "The authors express their deep gratitude to G. I. Budker and R. Z. Sagdeyev, corresponding members of the AN SSSR, for their interest and help in this work." Orig. art. has: 7 figures, 3 formulas, and 1 table.

L 6625-65
ACCESSION NR: AP4047369

ASSOCIATION: Institut yadernoy fiziki, Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Nuclear Physics, Siberian Branch of Academy of Sciences SSSR)

SUBMITTED: 25Mar64 ENCL: 00

SUB CODE: NE NO REF SOV: 006 OTHER: 003

Card 3/3

L 17798-65 EWT(d)/EWT(l)/EWG(k)/EPA(sp)-2/SEC(k)-2/EEC-4/EPA(w)-2/EEC(t)/T/EEC(b)-2/
EWA(m)-2 Po-4/Pz-6/Pab-10/Pq-4/Pg-4/Pi-4/Pk-4/Pl-4 IJP(c)/SSD(b)/AFWL/AEDC(b)/
SSD/SSD(a)/ASD(f)-2/BSD/AS(mp)-2/ASD(a)-5/APETR/RAEM(a)/ESD(c)/ESD(gs)/ESD(t) AT
ACCESSION NR: AP5001146 S/0294/64/002/006/0837/0841

AUTHORS: Kurtmullayev, R. Kh.; Nesterikhin, Yu. Ye.; Pil'skiy, V. I.; Ponomarenko, A. G.

TITLE: Velocity diagnostics of plasma jets

SOURCE: Teplofizika vysokikh temperatur, v. 2, no. 6, 1964, 837-841

TOPIC TAGS: microwave equipment, microwave plasma, plasma, interferometer, electron collision, phase shift, reflected signal envelope / OK 15 oscillograph, 23LO51A cathode ray tube, 6V2P diode, OK 17 oscilloscope

ABSTRACT: A microwave interferometer for plasma speed diagnostics is described. The characteristics of the interferometer are: λ = 8 mm; resolving power 3×10^{-8} sec; maximum rate of phase change ± 6 rad/μsec, and sweep range T = (3 to 100) μsec. The interferometer operates by measuring the phase shift of the probe waves and by utilizing a frequency transformation from $f_o = 3.7 \times 10^{10}$ cycles to an intermediate F = 30 Mcycle frequency with a heterodyne circuit. This is then compared with a reference frequency phase F_o = 30 Mcycle on a cathode-ray oscilloscope. The schematic of the interferometer is shown in Fig. 1 on the

Card 1/4

L 17798-65
ACCESSION NR: AP5001146

Enclosures. The instrument was used to measure the phase shift $\varphi(t)$

$$\varphi(t) = 2\pi \frac{l}{\lambda}\left(1 - \frac{1}{l}\int_0^l \sqrt{\varepsilon(x,t)}\,dx\right),$$

the strength of reflected and transmitted signals, and thus to determine the mean electron density N, conductivity σ, and electron collision frequency ν. The plasmoid diameter was 12 λ and was generated from a conical source. The minimum value of N was 5×10^{10} cm^{-3}, and the boundary velocity was 1.4×10^{6} cm/sec. The measurement accuracy is independent of probe signal absorption. "The authors are grateful to Yu. M. Malyavin for adjusting the apparatus and carrying out the experiments." Orig. art. has: 3 formulas and 2 figures.

ASSOCIATION: Institut yadernoy fiziki Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Nuclear Physics, Siberian Branch, Academy of Sciences SSSR)

SUBMITTED: 08Jun64 ENCL: 02

SUB CODE: ME,GP,EE NO REF SOV: 003 ER: 003

Card 2/4

L 17798-65
ACCESSION NR: AP5001146

ENCLOSURE: 01

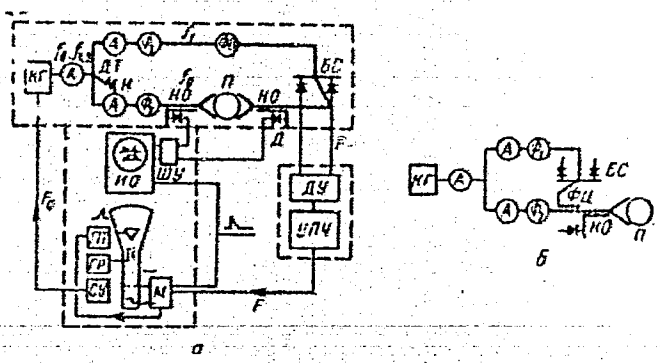


Fig. 1. Block-diagram of microwave interferometer
ДТ - double T-junction
Φ_1, Φ_2 - filters
КГ - probe signal source
U_1, U_2, Н - loads

Card 3/4

(to card 4/4)

L 17798-65
ACCESSION NR: AP5001146 (to card 3/4) ENCLOSURE: 02

А - attenuator
П - plasma
БС - balanced mixer
ДУ - differential amplifier
УПЧ - intermediate frequency amplifier
ИО - pulse oscillograph
ШУ - two-channel amplifier
ФЦ - ferrite circulator

Card 4/4

ACCESSION NR: AP4009944 S/0057/64/034/001/0190/0192

AUTHOR: Kurtmullayev,R.Kh.; Nesterikhin, Yu.Ye.; Ponomarenko,A.G.

TITLE: On measuring the instantaneous velocity of a plasma burst

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.1, 1964, 190-192

TOPIC TAGS: plasma, plasma burst, plasma burst velocity, plasma burst velocity measurement

ABSTRACT: A procedure is described for measuring the instantaneous velocity of plasma bursts by observing the Doppler shift of obliquely reflected microwaves. Microwave transmitting and receiving horns are located on opposite sides of the drift tube, with their axes inclined to and intersecting on the axis of the tube. In the absence of a plasma, no signal from the transmitting horn can enter the receiver. When the plasma burst reaches the critical position it reflects microwaves into the receiving horn. These are mixed with a portion of the transmitted signal and the beats are displayed on an oscilloscope screen. From these beats the Doppler shift, and hence the velocity, is obtained. This method has the advantage over some others that it responds, at any moment, to a definite section of the plasma burst

Card 1/2

ACC.NR: AP4009944

and thus enables one to investigate the structure of the burst. The described procedure was used to measure the velocities of plasma bursts from a conical gun, using 37 kilomegacycle microwaves with the antennas inclined 40° to the drift tube axis. The two parameters of the system (microwave frequency and antenna inclination) can be adjusted to meet a wide variety of conditions. For example, if the inclination is made very large the frequency can also be made large, with a resulting increase in space resolution. Orig.art.has: 1 formula and 3 figures.

ASSOCIATION: none

SUBMITTED: 31Aug63 DATE ACQ: 10Feb64 ENCL: 00

SUB CODE: PH NR REF SOV: 001 OTHER: 002

Card 2/2

L 14092-65 EWT(1)/EWP(m)/EWG(k)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EEC(b)-2/EWA(m)-2
Pz-6/Pe-4/Pd-1/Pab-10/Pi-4 IJP(c)/ASD(f)-2/SSD/SSD(b)/AEDC(b)/AEDC(a)/AFWL/AFETR/
ACCESSION NR: AP4043659 ESD(gs) AT S/0056/64/047/002/0774/0776

AUTHORS: Iskol'dskiy, A. M.; Kurtmullayev, R. Kh.; Nesterikhin, Yu. Ye.; Ponomarenko, A. G.

TITLE: Experiments on collision-free shock waves in a plasma

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 8, 1964, 774-776

TOPIC TAGS: plasma shock wave, plasma magnetic measurement, shock front structure, shock wave propagation, plasma radiation

ABSTRACT: Preliminary results are reported on the propagation of shock waves in a plasma of considerably lower density ($n < 10^{14}$ cm^{-3}) than that used by R. Patrick (Phys. Fluids v. 3, 1960, 321), in which the mean free path for charge exchange is much longer than the path covered by the shock wave. The shock wave was produced in the plasma when a magnetic field was abruptly increased by discharging a capacitor bank (magnetic piston). Measurements with the aid of an

Card 1/4

electron-optical converter and magnetic probes have shown that oscillations exist within the shock front, in qualitative agreement with the predictions made by R. Sagdeyev (Symposium on Electromagnetics and Fluid Dynamics of Gaseous Plasma, Polytch. Inst. of Brooklyn, 1961), V. I. Karpman (ZhTF v. 33, 959, 1963), and R. W. Morton, Finite Amplitude Compression Waves in Collision Free Plasma, Preprint NYO-10434, New York University, 1964). Additional phenomena accompanying the convergence of the shock wave to the chamber axis were also recorded, including a burst of radio emission in the 3 and 0.8 cm bands at the instant of cumulation, with a signal duration $\sim 30 \times 10^{-9}$ sec, corresponding to the time necessary for the hydromagnetic disturbance to cover a distance of the order of 1--2 cm. This correlates with the estimates obtained for the wave front with the aid of the optical and magnetic measurements. "The authors are grateful to G. I. Budker for continuous attention and interest in the work. and to R. Z. Sagdeyev and A. A. Galeyev for a discussion and help." Orig. art. has: 4 figures.

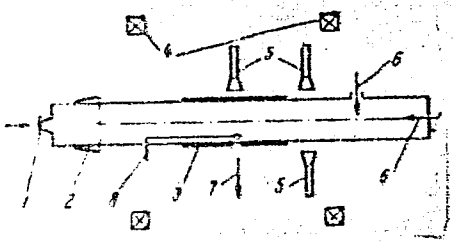
L 14032-65
ACCESSION NR: AP4043659

ASSOCIATION: Institut yadernoy fiziki Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Nuclear Physics, Siberian Department, AN SSSR)

SUBMITTED: 09May64 ENCL: 01

SUB CODE: NP NO REF:SOV: 001 OTHER: 008

Card 1/4



1 - electrodynamic pulsed inlet of neutral gas,
2 - conical turn producing a pre-ionized plasma,
3 - shock turn of magnetic piston,
4 - coils producing axial magnetic field,
5 - microwave antenna horns
6 - scintillation fast-electron and x-ray pickups
7 - transverse slot for registration of shock wave
8 - magnetic micro-probe

Fig. 1. Schematic diagram of the experimental apparatus.

L 01463-66 EWT(l)/EPF(n)-2/EWG(m) EPA(w)-2 IJP(c) AT

ACCESSION NR: AP5016651 UR/0382/65/000/002/0035/0043
533.9.082

AUTHOR: Iskol'dskiy, A. M.; Kurtmullayev, R. Kh.; Luk'yanov, V. N.; Nesterikhin, Yu. Ye.; Ponomarenko, A. G.

TITLE: Some properties of the behavior of plasma heated by collisionless shocks

SOURCE: Magnitnaya gidrodinamika, no. 2, 1965, 35-43

TOPIC TAGS: plasma shock wave, shock wave heating, plasma diagnostics, microwave, plasma containment

ABSTRACT: The generation of collisionless shocks in plasma with quasistatic axial magnetic field by use of theta-pinches (powered by a storage system with maximum energy of about 3000 J) is discussed. Plasma density in the experiments was about 10^{13} cm^{-3}. Magnetic and optical measurements indicate the formation of a cylindrical "magnetic piston" driving the collisionless shocks which concentrates along the plasma axis. Also studied are the accompanying phenomena of X-ray and microwave (8 mm) noise emission. The diagnostic instrumentation (magnetic and scintillation probes and image-converter camera) is described in detail and typical results are shown (e. g. collisionless shock is shown to run ahead of the current sheet). It

Card 1/2

L 01463-66
ACCESSION NR: AP5016651

6

is shown in the experiments that plasma is heated during first current rise (with trapping of the magnetic field also occuring). Later, a cold plasma sheet formed at the tube walls together with the field trapped in the hot plasma leads to containment of plasma for a few microseconds. "The authors thank Academician G. I. Budker and Corresponding member AN SSSR R. Z. Sagdeyev for their continued interest and help in interpreting the experiment." Orig. art. has: 7 figures.

ASSOCIATION: none

SUBMITTED: 12Aug64 ENCL: 00 SUB CODE: ME, EM

NO REF SOV: 004 OTHER: 004

Card 2/2

L 52353-65 EWP(m)/EPF(n)-2/EPR/EPA(w)-2/EWA(h)/EWA(c)/EWT(l)/FCS(k)/EWG(m)/EWG(m)
Pi-4/Pd-1/Po-4/Pz-6/Pab-10 IJP(c) WW/AT

ACCESSION NR: AP5013374 UR/0207/65/000/002/0079/0083

AUTHORS: Kurtmullayev, R. Kh. (Novosibirsk); Malinovskiy, V. K. (Novosibirsk); Nesterikhin, Yu. Ye. (Novosibirsk); Ponomarenko, A. G. (Novosibirsk) 78 76 B

TITLE: Excitation of strong collisionless shock waves in plasma 21

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 2, 1965, 79-83

TOPIC TAGS: shock wave, plasma, magnetic field, electron temperature, electron density, Alfven wave, plasma shock wave

ABSTRACT: Experimental results were obtained on collisionless shock wave excitation in a plasma. The plasma was created in a conical source by a pair of 17 μf-10 kv capacitors. The discharge lasted 5 μsec at 350 kamps. The plasmoid was then accelerated through a 0-2 kilo-oersted longitudinal magnetic field in a 5.2 x 200 cm glass tube. The shock wave excitation was achieved by means of a copper coil supplied by a 0.6 μf-50 kv capacitor bank. The discharge time was 10^{-6} μsec. The density of the plasmoid varied between 5×10^{14} to 5×10^{16} cm^{-3}. Spectrophotometric records indicated that after the excitation coil discharge the plasma is set into periodic oscillations. X-ray measurements on the

Card 1/2

L 52353-65

ACCESSION NR: AP5013374

2

plasmoid showed a sharp drop in x-ray output as the electron density of the plasma increased from 10^{14} to 10^{16}. These x-rays are shown to arise after the excitation of the plasma shock wave. Special collectors were used to measure the ion and electron currents, but it was not clear how the shock front was forming in the plasmoid. "The authors express their deep gratitude to G. I. Budker for his interest and to R. Z. Sagdeyev for his valuable advice." Orig. art. has: 11 figures and 2 formulas.

ASSOCIATION: none

SUBMITTED: 09May64 ENCL: 00 SUB CODE: ME, NP

NO REF SOV: 002 OTHER: 002

Card 2/2 mfb